



Digital Financial Inclusion, SME Resilience, and Platform-Based Competitiveness: A Comparative Institutional Analysis of India and Brazil

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ABSTRACT

This article examines how digital financial inclusion influences SME resilience, market participation, and regional competitiveness through a comparative institutional analysis of India and Brazil. The study argues that digital payment infrastructures, fintech regulation, platform-based credit systems, and institutional governance capacity jointly determine whether digital finance improves enterprise productivity or reproduces structural exclusion. India and Brazil are selected because both represent large emerging economies with substantial informal sectors, rapid fintech adoption, and state-led financial inclusion strategies, yet they differ in governance architecture, payment infrastructure design, and SME policy coordination. Drawing on World Bank Global Findex evidence, IMF financial access indicators, OECD SME digitalization research, UNCTAD digital economy reports, and peer-reviewed literature, the article demonstrates that India's public digital infrastructure model has expanded payment access and platform participation, while Brazil's central bank-led Pix system has strengthened transactional inclusion and competitive pressure in financial services. However, both cases reveal persistent constraints related to credit access, data governance, digital skills, informality, and regional inequality. The findings indicate that digital financial inclusion improves SME resilience only when institutional governance, interoperability, consumer protection, and productive capability policies are integrated. This article contributes to business and economics scholarship by developing a governance-centered framework linking digital finance, SME transformation, market

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competitiveness, and inclusive economic development.

Keywords: digital financial inclusion; SMEs; fintech; platform economy; India; Brazil; institutional governance; economic resilience; competitiveness; digital transformation

INTRODUCTION

Digital financial inclusion has become a central feature of contemporary economic transformation, particularly in emerging economies where small and medium-sized enterprises remain constrained by informality, limited collateral, weak credit histories, fragmented supply chains, and restricted access to formal finance. The rise of instant payment systems, mobile banking, fintech lending, digital identity, open banking, and platform-based commerce has created new opportunities for firms to enter formal markets, reduce transaction costs, access customers, and participate in wider digital ecosystems. The World Bank's Global Findex 2025 reports updated evidence on account ownership, digital payments, borrowing, saving, mobile phone ownership, internet use, and digital safety across 141 economies, based on nationally representative surveys conducted in 2024.

This study argues that digital financial inclusion should not be understood merely as household access to financial accounts or electronic payments. Rather, it represents a broader institutional and organizational transformation connecting financial infrastructure, SME productivity, platform competitiveness, and economic resilience. For SMEs, digital finance may reduce payment frictions, improve cash-flow visibility, support formalization, strengthen supplier relationships, and enable alternative credit scoring. However, these effects are not automatic. They depend on governance quality, regulatory credibility, interoperability, data protection, competition policy, digital literacy, and productive capacity development.

India and Brazil provide analytically valuable comparative cases because both economies have pursued large-scale digital financial inclusion strategies while relying on different institutional mechanisms. India's model centers on public digital infrastructure, including digital identity, real-time payments, bank account expansion, and platform-based service delivery. Brazil's model has been strongly shaped by central bank-led payment innovation, especially Pix, alongside open finance reforms and competitive fintech regulation. Both countries have large SME sectors, significant informal employment, regional inequality, and strong policy interest in expanding digital finance for development.

The academic and managerial problem addressed in this article concerns the conditions under which digital financial inclusion becomes a source of productive transformation rather than merely transactional modernization. While digital payments may expand access, they do not necessarily improve firm productivity, credit quality, or resilience unless they are embedded in governance systems that connect finance with business capability upgrading. OECD research emphasizes that digitalization can improve SME market access and operational efficiency, but smaller firms continue to face barriers such as limited skills, financial constraints, and insufficient organizational resources.

Existing literature has made important contributions but remains analytically fragmented. North (1990) emphasizes that institutions structure incentives and reduce uncertainty in economic exchange. Porter (1998) links competitiveness to productivity, clusters, and strategic positioning. Teece (2018) shows that dynamic capabilities enable firms to adapt under technological uncertainty. Beck, Demirgüç-Kunt, and Levine (2007) demonstrate the relationship between financial development and firm growth. Gomber, Koch, and Siering (2017) analyze fintech as a reconfiguration of financial services. Sahay et al. (2020) emphasize fintech's potential for inclusion while warning of regulatory risks. Arner, Barberis, and Buckley (2020) argue that digital finance requires regulatory innovation and institutional coordination. Nambisan et al. (2019) connect digital transformation with entrepreneurship and innovation systems.

While previous studies emphasize access, efficiency, and fintech innovation, current scholarship remains limited in explaining how digital financial inclusion interacts with SME resilience, platform competitiveness, and institutional governance. Existing research often treats digital finance as a technical infrastructure rather than a business transformation mechanism. Other studies focus on financial inclusion at the household level but underexplore firm-level implications for productivity, market access, and strategic adaptation. Comparative business research also remains limited in examining how different institutional architectures produce different SME outcomes.

The theoretical gap lies in the insufficient integration of institutional economics, SME strategy, digital platform theory, and financial inclusion scholarship. The empirical gap concerns the lack of comparative evidence on how India and Brazil's digital financial systems influence SME resilience through different governance mechanisms. The market transformation gap relates to limited understanding of how instant payment infrastructures and fintech ecosystems reshape competition among banks, platforms, and small enterprises. The strategic implementation gap concerns how SMEs convert transactional digitization into organizational capability, creditworthiness, and competitive advantage.

This article contributes to business and economics scholarship in three ways. First, it develops a comparative institutional framework linking digital financial infrastructure with SME resilience and market competitiveness. Second, it demonstrates that digital inclusion outcomes depend on governance capacity, interoperability, and productive capability policies rather than payment access alone. Third, it provides managerial and policy implications for firms, regulators, and development institutions seeking to transform digital financial inclusion into inclusive economic growth.

The analytical framework is expressed as follows:

Digital Financial Infrastructure → Institutional Governance → SME Capability Formation → Market Participation → Economic Resilience

The research objective is to examine how India and Brazil's digital financial inclusion models influence SME resilience, platform-based competitiveness, and inclusive economic development through distinct institutional governance systems.

METHODOLOGY

This study adopts a comparative institutional and strategic business research design to analyze how digital financial inclusion affects SME resilience and market competitiveness in India and Brazil. The cases were selected because both countries are large emerging economies with extensive informal sectors, substantial SME populations, rapid fintech development, and active state involvement in digital financial infrastructure, yet they differ significantly in institutional architecture and policy coordination. India represents a public digital infrastructure model built around identity, payments, and platform interoperability, whereas Brazil represents a central bank-led financial innovation model emphasizing instant payments, open finance, and competitive regulation. The unit of analysis is the national digital financial inclusion ecosystem, with particular attention to SMEs as organizational actors embedded in financial, technological, and institutional systems. Core variables include payment interoperability, fintech competition, SME access to finance, digital capability, regulatory governance, data protection, platform participation, and resilience outcomes. The theoretical-methodological alignment integrates institutional economics, financial inclusion theory, dynamic capabilities, and platform strategy to explain how governance arrangements mediate the relationship between digital finance and firm-level transformation.

The empirical analysis uses triangulated secondary data from World Bank Global Findex indicators, IMF Financial Access Survey materials, OECD SME digitalization studies, UNCTAD digital economy reports, central bank publications, policy reports, corporate and fintech disclosures, and peer-reviewed literature. The analysis combines qualitative institutional comparison with strategic interpretation of market mechanisms and governance outcomes. Triangulation is achieved by comparing international datasets, policy evidence, and academic findings across payment adoption, SME digitalization, credit inclusion, fintech competition, and regulatory design. Ethical considerations are limited because the study uses publicly available secondary sources and does not fabricate interviews or respondent quotations. The limitations include uneven data comparability between countries, differences in SME definitions, partial visibility of platform credit algorithms, and the difficulty of isolating causal effects between digital payments and productivity outcomes. Nevertheless, the comparative design is appropriate for identifying institutional mechanisms, strategic variation, and governance-dependent pathways linking digital finance with SME resilience.

Findings and Discussion

1. Digital Financial Infrastructure and Institutional Governance

India and Brazil demonstrate that digital financial inclusion is shaped by institutional architecture rather than technology alone. India's approach relies on public digital infrastructure and interoperability, while Brazil's approach has been driven strongly by central bank coordination. In both cases, institutional credibility has been essential for scaling adoption, reducing transaction costs, and encouraging participation by firms and consumers.

India's digital financial transformation has been associated with the expansion of bank accounts, mobile payments, and platform-based service delivery. The Unified Payments Interface has become a core layer of India's digital economy, supporting low-cost transactions among households, merchants, and small businesses. Recent reporting indicates that UPI processed more than 600 million transactions daily by July 2025, illustrating the scale of India's payment infrastructure expansion.

Brazil's Pix system represents a different but equally significant institutional model. Rather than relying primarily on a broad digital public infrastructure stack, Brazil's central bank positioned Pix as a national instant payment system designed to increase competition, reduce payment costs, and expand financial access. This model strengthened the role of regulatory governance as a market-shaping instrument.

The comparison indicates that digital financial infrastructure improves SME participation when it reduces uncertainty, lowers transaction costs, and increases interoperability. This supports institutional economics by showing that payment systems function as market-enabling institutions rather than neutral technologies. For managers, the implication is that SMEs should treat payment digitization as an entry point into broader business transformation, including inventory control, customer analytics, formal accounting, and platform expansion.

2. SME Capability Formation and Organizational Transformation

The findings indicate that digital financial inclusion generates stronger business outcomes when SMEs possess the organizational capabilities needed to convert transaction data into strategic value. Digital payments can improve cash-flow tracking, reduce leakage, formalize sales records, and support credit assessment. However, SMEs without digital skills, accounting capacity, or managerial systems may remain trapped in low-productivity activities despite payment access.

OECD research highlights that SME digitalization can improve competitiveness by helping firms access new markets and improve operational efficiency, while also noting persistent barriers in skills, finance, and process adaptation. This evidence is highly relevant for India and Brazil, where small enterprises often face resource constraints that limit their ability to use digital tools strategically.

India's digital infrastructure has enabled millions of small merchants to accept digital payments, but credit access remains uneven. UPI transaction histories may support future lending models, yet formal borrowing remains constrained by risk assessment, informality, taxation concerns, and weak collateral structures. Brazil's Pix has similarly expanded transactional inclusion, but productive financing depends on whether banks and fintech firms can convert payment data into responsible credit systems.

The theoretical implication is that financial inclusion must be connected to dynamic capability formation. Teece's framework suggests that firms need sensing, seizing, and reconfiguring capabilities to benefit from technological change. SMEs that use digital finance only for payment acceptance may gain convenience, while SMEs that integrate digital finance with accounting, supplier management, marketing, and credit planning may achieve stronger resilience.

3. Platform Markets, Fintech Competition, and Credit Inclusion

Digital financial inclusion reshapes market competition by lowering entry barriers for fintech firms, expanding platform-based lending, and challenging traditional banking models. In India, payment infrastructure has supported the growth of fintech ecosystems, digital commerce, and merchant services. In Brazil, Pix and open finance reforms have increased competitive pressure on incumbent banks and encouraged innovation in financial products.

However, platform-based credit introduces governance challenges. Algorithmic lending may improve access for SMEs lacking conventional credit histories, but it also creates risks related to data privacy, opaque scoring models, over-indebtedness, and discriminatory pricing. IMF research emphasizes that fintech can support financial inclusion and growth, but policymakers must also manage risks associated with digital finance.

The comparison suggests that Brazil's regulatory centralization may provide stronger oversight capacity, while India's ecosystem scale provides greater diffusion potential. India's strength lies in broad infrastructural reach and entrepreneurial experimentation. Brazil's strength lies in payment governance and regulatory steering. The weakness in both systems is that transactional inclusion does not automatically resolve SME credit constraints.

For business strategy, fintech firms must develop responsible credit models that combine alternative data with transparent risk governance. For policymakers, the priority is to establish data-sharing standards, dispute resolution systems, cybersecurity safeguards, and proportional regulation that protects users without suppressing innovation.

4. Resilience, Informality, and Inclusive Economic Development

Digital financial inclusion can strengthen SME resilience by improving liquidity management, widening customer access, reducing cash dependence, and enabling faster adaptation during shocks. The COVID-19 pandemic showed that firms with digital payment capacity and online market access were often better positioned to maintain sales and receive support. Yet inclusion remains uneven across regions, genders, income groups, and firm sizes.

The World Bank's Global Findex 2025 emphasizes that digital and financial inclusion gaps persist across gender, income, connectivity, and safety dimensions. This matters for SMEs because household-level exclusion often overlaps with enterprise-level constraints, especially among microenterprises, women-owned businesses, and informal workers.

India's development challenge is to convert digital payment scale into productive credit, enterprise upgrading, and regional inclusion. Brazil's challenge is to deepen the connection between instant payment adoption, SME financing, and productivity growth. In both economies, the developmental value of digital finance depends on complementary policies in digital literacy, taxation design, consumer protection, competition policy, and SME capability support.

Table 1. Comparative Matrix of Governance Systems, Strategic Transformation, and Business Outcomes

Variable	India	Brazil	Empirical Evidence	Analytical Interpretation
Governance System	Public digital infrastructure and interoperability model	Central bank-led instant payment and open finance model	UPI scale and India Stack expansion; Pix-led payment transformation	Institutional design shapes adoption speed and market coordination
SME Financial Inclusion	Broad payment access but uneven formal credit conversion	Strong transactional inclusion with improving fintech competition	World Bank and IMF financial inclusion indicators	Payment access must be linked to responsible credit systems
Market Mechanism	Platform-based merchant digitization and fintech experimentation	Regulatory-driven competition and bank-fintech integration	Expansion of instant payments and digital financial services	Competition policy influences inclusion quality
Organizational Transformation	Merchant digitization, digital records, platform participation	Payment formalization, customer reach, financial data visibility	OECD SME digitalization evidence	SME capabilities determine whether digital tools raise productivity
Governance Risk	Data privacy, informal taxation fears, algorithmic opacity	Consumer protection, concentration, cyber risk	IMF digital finance risk assessments	Inclusion requires trust, transparency, and institutional safeguards
Developmental Outcome	Large-scale financial access with persistent credit gaps	Strong payment modernization with regional inequality constraints	World Bank Global Findex and policy evidence	Digital inclusion improves resilience only when embedded in broader development policy

The table demonstrates that India and Brazil have both achieved significant progress in digital financial inclusion, but through different institutional pathways. India’s model prioritizes scale, interoperability, and platform diffusion. Brazil’s model prioritizes regulatory coordination, payment efficiency, and financial competition. The key analytical finding is that neither model guarantees SME resilience unless digital finance becomes linked to enterprise capability formation, productive investment, and governance legitimacy.

Theoretical Propositions

Proposition 1: Digital financial infrastructure strengthens SME resilience when interoperability reduces transaction costs and increases market participation.

This proposition reflects the institutional economic logic that efficient exchange systems reduce uncertainty and expand market access. However, interoperability must be combined with trust, cybersecurity, and regulatory legitimacy.

Proposition 2: SME capability formation mediates the relationship between digital financial inclusion and productivity growth.

Digital payments alone do not raise productivity. Productivity effects emerge when SMEs integrate digital finance with accounting, inventory systems, customer analytics, supplier coordination, and strategic planning.

Proposition 3: Governance quality moderates the developmental impact of fintech competition.

Fintech competition can improve inclusion, but weak governance may produce over-indebtedness, data misuse, exclusionary algorithms, and market instability. Effective regulation transforms fintech from a transactional innovation into a developmental institution.

Proposition 4: Inclusive digital finance contributes to economic resilience when financial access, market competition, and SME upgrading policies are institutionally coordinated.

This proposition emphasizes that digital inclusion is most effective when embedded in broader economic development strategies involving skills, infrastructure, competition policy, and enterprise support.

CONCLUSION

This article examined how digital financial inclusion influences SME resilience, platform-based competitiveness, and inclusive economic development through a comparative institutional analysis of India and Brazil. The central finding is that digital finance improves business and economic outcomes only when technological infrastructure is embedded within effective governance systems and connected to SME capability formation. India's public digital infrastructure model demonstrates the power of interoperability and scale, while Brazil's central bank-led model illustrates the role of regulatory coordination in reshaping financial competition.

The article contributes theoretically by integrating institutional economics, financial inclusion theory, SME strategy, and platform governance into a single comparative framework. Empirically, it shows that India and Brazil have both advanced digital transactional inclusion, but continue to face challenges in translating payment adoption into formal credit access, productivity improvement, and regional economic resilience.

digital capability. Digital transaction records should be used for financial planning, customer relationship management, inventory control, and credit readiness. The policy implication is that governments should not evaluate digital financial inclusion merely through adoption metrics. More important indicators include SME productivity, responsible credit expansion, competition quality, consumer protection, and inclusion of disadvantaged firms.

The developmental implication is that digital finance can support inclusive growth, but only if it reduces structural barriers rather than reproducing them in algorithmic form. Persistent gaps in skills, connectivity, gender inclusion, credit access, and regional infrastructure must be addressed through coordinated policy.

The study is limited by reliance on secondary data, differences in national reporting systems, and the difficulty of measuring direct causal links between digital finance and SME productivity. Future research should use firm-level panel data, sectoral productivity analysis, and comparative studies across additional emerging economies to test the propositions developed here. Overall, this article argues that the future of inclusive digital capitalism depends not simply on expanding digital payments, but on governing digital finance as a productive, competitive, and socially embedded economic institution.

REFERENCES

- Arner, D. W., Barberis, J., & Buckley, R. P. (2020). *FinTech, RegTech, and the reconceptualization of financial regulation*. *Northwestern Journal of International Law & Business*, 37(3), 371–413.
- Beck, T., Demirgüç-Kunt, A., & Levine, R. (2007). *Finance, inequality, and the poor*. *Journal of Economic Growth*, 12(1), 27–49.
- Bianchini, M., & Lasheras Sancho, M. (2025). *SME digitalisation for competitiveness: The 2025 OECD D4SME Survey*. OECD Publishing.
- Demirgüç-Kunt, A., Klapper, L., Singer, D., & Ansar, S. (2025). *The Global Findex Database 2025*. World Bank.
- Gomber, P., Koch, J. A., & Siering, M. (2017). *Digital finance and FinTech*. *Journal of Business Economics*, 87(5), 537–580.
- IMF. (2025). *Financial Access Survey 2025*. International Monetary Fund.
- IMF. (2025). *Digital payments and finance policy papers*. International Monetary Fund.
- Klapper, L., & Singer, D. (2020). *The role of demand-side data in measuring financial inclusion*. *World Bank Research Observer*, 35(2), 179–204.
- Nambisan, S., Wright, M., & Feldman, M. (2019). *The digital transformation of innovation and entrepreneurship*. *Research Policy*, 48(8), 103773.
- North, D. C. (1990). *Institutions, institutional change and economic performance*. Cambridge University Press.
- OECD. (2023). *SME digitalisation to manage shocks and transitions*. OECD Publishing.
- OECD. (2025). *SME digitalisation for competitiveness*. OECD Publishing.

- Philippon, T. (2020). The great reversal: How America gave up on free markets. Harvard University Press.*
- Porter, M. E. (1998). Competitive advantage: Creating and sustaining superior performance. Free Press.*
- Sahay, R., von Allmen, U. E., Lahreche, A., Khera, P., Ogawa, S., Bazarbash, M., & Beaton, K. (2020). The promise of FinTech: Financial inclusion in the post COVID-19 era. International Monetary Fund.*
- Stiglitz, J. E. (2021). The proper role of government in the market economy. Journal of Government and Economics, 1, 100004.*
- Teece, D. J. (2018). Business models and dynamic capabilities. Long Range Planning, 51(1), 40–49.*
- UNCTAD. (2024). Digital Economy Report 2024: Environmentally sustainable digitalization, trade and development. United Nations.*
- World Bank. (2024). Digital progress and trends report. World Bank.*
- World Bank. (2025). The Global Findex Database 2025: Connectivity and financial inclusion in the digital economy. World Bank.*